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UNITED STATES UTILITY PATENT APPLICATION

FOR

**ELECTRONIC BALLAST WITH
PROGRAMMABLE PROCESSOR**

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ELECTRONIC BALLAST WITH PROGRAMMABLE PROCESSOR

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This application is a continuation-in-part (CIP) of U.S. application no. 10/145,420, filed May 14, 2002 and entitled Electronic Ballast For Discharge Lamps, which is now U.S. Patent No. 6,650,067

1. FIELD OF THE INVENTION

The present invention relates generally to ballast circuits for operating gaseous discharge lamps. More particularly, the present invention relates to an electronic ballast with a programmable processor.

2. BACKGROUND OF THE INVENTION

Ballast circuits are generally used in gaseous discharge lighting systems to regulate the supply of electrical power to the lamp. The type and size of lamp to be operated are typically determinative of how the ballast circuit will be configured. For example, high intensity discharge (HID) lamps such as mercury, metal halide, and high pressure sodium lamps are usually operated at high wattage and require a different ballast circuit than lamps such as fluorescent lamps which operate at relatively low wattage. Even among lamps of the same type (i.e., mercury, metal halide, high pressure sodium, fluorescent, etc.) the specific lamp wattage can vary, which in turn requires a corresponding variance of elements within the ballast circuit in order to optimize operation of the lamps. As a result, conventional ballast circuits are unable to accommodate proper operation of different lamps types and/or lamps of the same type which operate at different wattages.

Typical ballast circuits include a starting circuit for igniting the lamp and an operating LCR (Inductor-Capacitor-Resistor) circuit for sustaining lamp ignition. In a typical ballast circuit, the same inductor is used to produce the electrical excitation necessary to ignite as well as to operate the lamp. In order to withstand large operating currents for prolonged periods of